



## National Science Foundation Office of Inspector General

### Assessing Intent in Research Misconduct Investigations

The assessment of intent by institution investigation committees can be a challenge. The following describes our office's general approach to assessing intent.

#### Levels of Intent

NSF's research misconduct regulation identifies three levels of intent (*i.e.*, mental state or *mens rea*) that satisfy the intent element required for a finding of research misconduct: reckless, knowing, or intentional.<sup>1</sup> A fourth level, careless, is specifically identified as insufficient to make a finding of research misconduct. These four levels of intent form a continuum describing the subject's mental state leading up to and during the alleged act of misconduct. These levels have specific legal significance and definitions which often prove troublesome for awardee institution investigation committee members who are unaccustomed to parsing such distinctions. Typically, we recommend that an institution's investigation committee members consult their legal counsel to assist in distinguishing between the levels of intent. However, to facilitate such discussions we have developed the following framework as a starting point.

- Careless:** The subject did not exercise the care that a reasonable person similarly situated would have exercised under the circumstances. Careless is essentially synonymous with negligent.
- Reckless:** The subject did not exercise the care a reasonable person similarly situated would have exercised under the circumstances, and did so with a conscious awareness of, or indifference to, the risk of adverse consequences of his actions and the potential resulting harm. Reckless is essentially synonymous with grossly negligent.
- Knowing:** The subject had an awareness or understanding of his actions. Knowingly is essentially synonymous with consciously.
- Intentional:** The subject acted with a specific purpose in mind. Intentional is essentially synonymous with purposeful or willful.

The distinction between careless and reckless intent is the most critical because it is the distinction that determines whether a finding of research misconduct is warranted. Unlike the other

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<sup>1</sup> [45 C.F.R. § 689.2\(c\)\(2\)](#).

levels, these levels invoke the use of the “reasonable person” standard. For example, the subject may be found to be reckless if a reasonable person with his/her training and experience would have recognized the likely consequences of the misconduct. A reasonable new PI would more likely than not have read the NSF Grant Proposal Guide, which contains a notice about NSF’s expectations for scholarship, and therefore be cognizant of the probable consequences of research misconduct in an NSF proposal.

The distinction between recklessness and the two higher levels of intent is the shift from the reasonable person perspective to the actual mental state of a specific individual (the subject). For knowing and intentional levels of intent, we are concerned with whether the subject had a conscious awareness of the actions. For example, the analysis might involve whether the act required any conscious physical action, such as turning a dial or pushing a button to alter data. The distinction that raises the level of intent further to intentional is the subject’s motive to achieve a specific purpose through the misconduct, such as bolstering the number of publications on a proposal’s biosketch in order to increase the likelihood of receiving an award. For this reason “intentional,” “willful,” and “purposeful” are synonymous. Keeping these terms in mind may help an investigation committee work through the semantic awkwardness of discussing “intentional intent.” Although these synonyms may aid in deliberations, committees should report their findings to us explicitly in the terms used in the regulation—“intentional” instead of “purposeful.” A finding of intentional misconduct may be—but does not have to be—supported by evidence of premeditation. Evidence of premeditation may also be an aggravating factor in other parts of the case, such as weighing the appropriate actions to take when there is a finding of misconduct.

The chart below illustrates these distinctions and the relationship to making a finding of research misconduct.

Careless	Reckless	Knowing	Intentional
Reasonable Person Standard		Individual Standard	
No Finding	Finding of Research Misconduct		

### Assessing Evidence of Intent

Establishing a subject’s level of intent means assessing a person’s thoughts before, during, and sometimes after the misconduct. Many investigation committees struggle with identifying evidence of intent, where objective evidence about a person’s statements and acts must be used to infer the person’s state of mind. In our experience, committees of faculty members can be uncomfortable weighing circumstantial evidence and drawing inferences about someone’s mental state. Reminding committees that intent (like the other elements of a research misconduct finding) must be proven by a preponderance of the evidence<sup>2</sup> generally alleviates any such discomfort. All

<sup>2</sup> [45 C.F.R. § 689.2\(c\)\(3\)](#).

that is required for a finding of research misconduct is that it is more likely than not that the subject acted with a culpable level of intent.

Interviews with the subject and other witnesses—including the complainant—are a primary source of evidence of intent in any investigation. In addition to asking questions about the alleged acts, committees should probe the veracity of the subject's statements about intent and resist taking a single statement at face value. On further questioning, a subject may make statements that are inconsistent with his/her own testimony or the documentary evidence (for example, email). Other witnesses may also corroborate or refute the subject's statements. Any corroborations or inconsistencies in testimony should be considered in the assessment of the subject's intent.

Evidence of a pattern of misconduct may support a conclusion about the subject's level of intent; however, it should not be used to prove the alleged act through an inference that the alleged act is a continuation of the pattern. While the preponderance of the evidence may only support a lower level of intent for a single act, a succession of bad acts demonstrates a pattern and potentially an underlying scheme indicative of a higher level of intent. In our cases, the assessment of pattern is not restricted to NSF proposals and awards, but can include work unrelated to NSF funding. While NSF would not make a finding of misconduct without an NSF connection, NSF does consider any pattern of misconduct when assessing intent. We encourage institutional committees to assess a subject's work for any additional acts of misconduct, in order to determine whether a pattern exists, and, if so, its effect on the level of intent.

Some acts are, by their inherent nature, unlikely to occur without the actor's awareness. A good example of such an act is verbatim plagiarism, as discussed below. In such cases the natural and reasonable inference is that the acts were performed with the subject's knowledge.

### **Assessing Intent in Verbatim Plagiarism Investigations**

One approach for assessing intent in verbatim plagiarism cases examines the acts of copying, pasting, and integrating (CPI) text into a document. CPI draws on the copy-and-paste description of plagiarism, and relates the physical actions of copying and pasting to the levels of intent to start the analysis. The intent level derived from CPI may then rise or fall according to other evidence.

**Copy:** Selecting and copying text and figures from electronic sources has become the digital equivalent of manual note-taking—but maintaining bibliographic information for citation purposes is still necessary. Copying without preserving information for proper attribution can be a reckless act, because a reasonable person would recognize the increased risk of later using the copied material without attribution.

**Paste:** The act of pasting copied material into a document is inherently a knowing, conscious act, because it generally requires manual highlighting followed by executing a copy command, changing documents, and executing a paste command. Thus, a knowing level of intent is inherent in the act of pasting the material into the new document, and the act becomes knowing plagiarism in the

conscious absence of subsequent steps to provide quotation marks, citation, and reference.<sup>3</sup> The recurrence of matching typographical errors, spelling conventions, and embedded citations or objects into the new document are common evidence of the copy-and-paste method of plagiarism demonstrating knowing intent.

**Integrate:** Additional specific steps to integrate the copied material into the body of a new document can help mislead the reader into concluding that the new document is the subject's original work. Those steps can elevate the intent level to intentional. Examples include: updating "in press" references cited in the source to reflect subsequent publication in journals; renumbering embedded citations to be consistent with the bibliography; or changing verb tenses to suggest work completed by another is to be performed in the future by the subject. Each of these specific steps on its face shows intent to achieve the specific purpose of making the copied material appear to be original. Evidence of integration of the copied material often supports findings of intentional plagiarism.

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<sup>3</sup> We introduced the Quotation-Citation-Reference (QCR) method for assessing the act of plagiarism in our March 2009 Semiannual Report, [p.43](#).